

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/588, 104  
Source: TFWP  
Date Processed by STIC: 08/10/2006

***ENTERED***



**IFWP**

## RAW SEQUENCE LISTING

DATE: 08/10/2006

PATENT APPLICATION: US/10/588,104

TIME: 11:02:40

Input Set : A:\004974.01207 SEQUENCE LISTING.txt

Output Set: N:\CRF4\08102006\J588104.raw

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/588,104

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Input Set : A:\004974.01207 SEQUENCE LISTING.txt

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50 aagttaaact taggaacagt tgggtttat cgaccaggc acagctctgc catgctggaa  
 51 agtttattac caggcattcg tgaccttct ctgccccctg tgatcgact tggattacag 1860  
 52 aatgacctct ttccttggc tcgagctgga atcattagca ctgttagaggt tctaaaagtc 1920  
 53 atggaggctt ttgtgaatga gcccaattat actgtatgga gcgacctgaa ctgtaacctg 1980  
 54 gggattctct caactcttct gtcccacaca gacttctatg aggaaatcca ggagttgtg 2040  
 55 aaagatgtct ttccacccat aggggagaga ctgggctggg accccaaacc tggagaagg 2100  
 56 catctcgatg cactcctgag gggcttgggt ctggaaaac taggaaaagc aggacataag 2160  
 57 gcaacgttag aagaagcccg tcgtcggtt aaggaccacg tgaaggaaa acagattctc 2220  
 58 tccgctgatc tgaggagtc tgcgttatctg actgtttga agcatggta tggcaact 2280  
 59 ttagatatta tgtaaaaact tcataaacaa gcagatatgc aagaagagaa aaaccgaatc 2340  
 60 gaaagagtcc ttggcgctac tctttgcct gacctgattc aaaaagtccct cacgttgc 2400  
 61 ctttcagaag aggtacgtcc acaggacact gtatcgtaa ttgggtggagt agctggaggc 2460  
 62 agcaagcatg gtaggaaagc tgcttggaaa ttcataaagg acaactggg agaactttat 2520  
 63 aaccgatacc agggaggatt cttaatatcc agactaataa agctatcagt tgaggatt 2580  
 64 gcagttgata aatggctgg agaggttaag gcttctcg agagtcaccc agctcctca 2640  
 65 gctgagcgta ccatccagca gtgttgtgaa aatattctgc tgaatgctgc ctggctaaag 2700  
 66 cgagatgctg agagcatccca ccagtaccc cttcagcggg aggccctcacc acccacagtg 2760  
 67 tgaatcctga ggtgccgcca ttggcggtt tgctgctcg ctgcaggat aaggtggagc 2820  
 68 taccgaacag ctgattcata tgccaagaat ttggagttt ctttcaaacc agtgggggtt 2880  
 69 ggacaatgaa ttagttaaac tggttcctgc tcacactcca gaattaaatt ctattaaaaa 2940  
 70 agggaaaatca gcaattcagc aaaaaaataa ataaaaaata aaaaatgtaa tatgatagta 3000  
 71 ataaaaataga gcataacgaa actgtgaaac tttctgaagc ctgtcagtg gttaaaaatg 3060  
 72 tttAACACTC tactgttaat gacagatgtt ctgttttat aacctaccaa aaggaaacta 3120  
 73 gaggttctt ggtgaagagc atttttgtga agtgggtct gcaaggagcc tataaagcca 3180  
 74 aggggtgtgt ccatttctgg gaatggtaa acacaaaagg ctgatagctg gtatcacata 3240  
 75 gttggagtca gtgcataatt ccaagtggct tttttttt ttggcacggg gactgatcag 3300  
 76 gaagatataat tcctgcataa ctcacatctga accaaggatt gtatgttagt ttccctcctt 3360  
 77 gccttccctt ctgtgtgacc gacccttgg caaaaaaaaa aacaaaaaagg aaaaaacaaa 3420  
 78 aacctaccct gttctggttt tttccctccc ttagtccca cccccaaccc ccattccctg 3480  
 79 gtgtccttct tagagatgaa gaaataataa gggaaacatct ttcatagcca cattaaataa 3540  
 80 gagaaaactga tatacattat tttttcttt ttaaagatga ctatataagaa ccctgaaatt 3600  
 81 tatatagtg agacaataga aataaaaaaga tcttcagcca ggcctttctg aaggagttat 3660  
 82 tctgctaaaa atggtcttag ttgtctgaaa agccagctct tgaacctctt cacaacagta 3720  
 83 tcaacactgg ctctcccg ttcattttat gctgtcgaga agtcagtggt aactgctgca 3780  
 84 gggcttaata cattagtggt aactggttt aaaaacaag actgtaaagcc tgggtgtgcc 3840  
 85 actgtttgct tcaacagttat atcctactaa taagcctcac ctatataatc caatgagtt 3900  
 86 taaatctaaa tctcattttcc ttcttcttcc cctacccccc tttcttttt ttcttaaaaaa 3960  
 87 aatattttgt gttattaaaca gaaattcata tttgggtgtgg cttAACGGTA tttcagaagg 4020  
 88 tcatcagatt gtgagactgc ttccctgaaa cattttgtg ctattgttt aaaaaaataa 4080  
 89 taaaaaaaaca gttggcggtt ataaaaatgt caatgtg 4140  
 91 <210> SEQ ID NO: 2  
 92 <211> LENGTH: 919  
 93 <212> TYPE: PRT  
 94 <213> ORGANISM: Homo sapiens  
 96 <400> SEQUENCE: 2  
 97 Met Trp Leu Ala Ala Ala Ala Pro Ser Leu Ala Arg Arg Leu Leu Phe 4177  
 98 1 5 10 15  
 99 Leu Gly Pro Pro Pro Pro Leu Leu Leu Leu Val Phe Ser Arg Ser  
 100 20 25 30

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101 Ser Arg Arg Arg Leu His Ser Leu Gly Leu Ala Ala Met Pro Glu Lys  
102 35 40 45  
103 Arg Pro Phe Glu Arg Leu Pro Ala Asp Val Ser Pro Ile Asn Tyr Ser  
104 50 55 60  
105 Leu Cys Leu Lys Pro Asp Leu Leu Asp Phe Thr Phe Glu Gly Lys Leu  
106 65 70 75 80  
107 Glu Ala Ala Ala Gln Val Arg Gln Ala Thr Asn Gln Ile Val Met Asn  
108 85 90 95  
109 Cys Ala Asp Ile Asp Ile Ile Thr Ala Ser Tyr Ala Pro Glu Gly Asp  
110 100 105 110  
111 Glu Glu Ile His Ala Thr Gly Phe Asn Tyr Gln Asn Glu Asp Glu Lys  
112 115 120 125  
113 Val Thr Leu Ser Phe Pro Ser Thr Leu Gln Thr Gly Thr Gly Thr Leu  
114 130 135 140  
115 Lys Ile Asp Phe Val Gly Glu Leu Asn Asp Lys Met Lys Gly Phe Tyr  
116 145 150 155 160  
117 Arg Ser Lys Tyr Thr Thr Pro Ser Gly Glu Val Arg Tyr Ala Ala Val  
118 165 170 175  
119 Thr Gln Phe Glu Ala Thr Asp Pro Arg Arg Ala Phe Pro Cys Trp Asp  
120 180 185 190  
121 Glu Pro Ala Ile Lys Ala Thr Phe Asp Ile Ser Leu Val Val Pro Lys  
122 195 200 205  
123 Asp Arg Val Ala Leu Ser Asn Met Asn Val Ile Asp Arg Lys Pro Tyr  
124 210 215 220  
125 Pro Asp Asp Glu Asn Leu Val Glu Val Lys Phe Ala Arg Thr Pro Val  
126 225 230 235 240  
127 Met Ser Thr Tyr Leu Val Ala Phe Val Val Gly Glu Tyr Asp Phe Val  
128 245 250 255  
129 Glu Thr Arg Ser Lys Asp Gly Val Cys Val Arg Val Tyr Thr Pro Val  
130 260 265 270  
131 Gly Lys Ala Glu Gln Gly Lys Phe Ala Leu Glu Val Ala Ala Lys Thr  
132 275 280 285  
133 Leu Pro Phe Tyr Lys Asp Tyr Phe Asn Val Pro Tyr Pro Leu Pro Lys  
134 290 295 300  
135 Ile Asp Leu Ile Ala Ile Ala Asp Phe Ala Ala Gly Ala Met Glu Asn  
136 305 310 315 320  
137 Trp Gly Leu Val Thr Tyr Arg Glu Thr Ala Leu Ile Asp Pro Lys  
138 325 330 335  
139 Asn Ser Cys Ser Ser Arg Gln Trp Val Ala Leu Val Val Gly His  
140 340 345 350  
141 Glu Leu Ala His Gln Trp Phe Gly Asn Leu Val Thr Met Glu Trp Trp  
142 355 360 365  
143 Thr His Leu Trp Leu Asn Glu Gly Phe Ala Ser Trp Ile Glu Tyr Leu  
144 370 375 380  
145 Cys Val Asp His Cys Phe Pro Glu Tyr Asp Ile Trp Thr Gln Phe Val  
146 385 390 395 400  
147 Ser Ala Asp Tyr Thr Arg Ala Gln Glu Leu Asp Ala Leu Asp Asn Ser  
148 405 410 415  
149 His Pro Ile Glu Val Ser Val Gly His Pro Ser Glu Val Asp Glu Ile

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150	420	425	430
151	Phe Asp Ala Ile Ser Tyr Ser Lys Gly Ala Ser Val Ile Arg Met Leu		
152	435	440	445
153	His Asp Tyr Ile Gly Asp Lys Asp Phe Lys Lys Gly Met Asn Met Tyr		
154	450	455	460
155	Leu Thr Lys Phe Gln Gln Lys Asn Ala Ala Thr Glu Asp Leu Trp Glu		
156	465	470	475
157	480	485	495
158	Ser Leu Glu Asn Ala Ser Gly Lys Pro Ile Ala Ala Val Met Asn Thr		
159	495	500	510
160	Trp Thr Lys Gln Met Gly Phe Pro Leu Ile Tyr Val Glu Ala Glu Gln		
161	505	515	525
162	Val Glu Asp Asp Arg Leu Leu Arg Leu Ser Gln Lys Lys Phe Cys Ala		
163	525	530	540
164	Gly Gly Ser Tyr Val Gly Glu Asp Cys Pro Gln Trp Met Val Pro Ile		
165	540	545	550
166	Thr Ile Ser Thr Ser Glu Asp Pro Asn Gln Ala Lys Leu Lys Ile Leu		
167	555	560	565
168	Met Asp Lys Pro Glu Met Asn Val Val Leu Lys Asn Val Lys Pro Asp		
169	570	575	580
170	Gln Trp Val Lys Leu Asn Leu Gly Thr Val Gly Phe Tyr Arg Thr Gln		
171	585	590	595
172	Tyr Ser Ser Ala Met Leu Glu Ser Leu Leu Pro Gly Ile Arg Asp Leu		
173	600	605	610
174	Ser Leu Pro Pro Val Asp Arg Leu Gly Leu Gln Asn Asp Leu Phe Ser		
175	615	620	625
176	Leu Ala Arg Ala Gly Ile Ile Ser Thr Val Glu Val Leu Lys Val Met		
177	630	635	640
178	Glu Ala Phe Val Asn Glu Pro Asn Tyr Thr Val Trp Ser Asp Leu Ser		
179	645	650	655
180	Cys Asn Leu Gly Ile Leu Ser Thr Leu Leu Ser His Thr Asp Phe Tyr		
181	660	665	670
182	Glu Glu Ile Gln Glu Phe Val Lys Asp Val Phe Ser Pro Ile Gly Glu		
183	675	680	685
184	Arg Leu Gly Trp Asp Pro Lys Pro Gly Glu Gly His Leu Asp Ala Leu		
185	690	695	700
186	Leu Arg Gly Leu Val Leu Gly Lys Leu Gly Lys Ala Gly His Lys Ala		
187	705	710	715
188	720	725	730
189	735	740	745
190	750	755	760
191	Lys His Gly Asp Gly Thr Thr Leu Asp Ile Met Leu Lys Leu His Lys		
192	765	770	775
193	Gln Ala Asp Met Gln Glu Glu Lys Asn Arg Ile Glu Arg Val Leu Gly		
194	780	785	790
195	Ala Thr Leu Leu Pro Asp Leu Ile Gln Lys Val Leu Thr Phe Ala Leu		
196	800	805	795
197	Ser Glu Glu Val Arg Pro Gln Asp Thr Val Ser Val Ile Gly Gly Val		
198	815	810	805

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199 Ala Gly Gly Ser Lys His Gly Arg Lys Ala Ala Trp Lys Phe Ile Lys  
 200 820 825 830  
 201 Asp Asn Trp Glu Glu Leu Tyr Asn Arg Tyr Gln Gly Gly Phe Leu Ile  
 202 835 840 845  
 203 Ser Arg Leu Ile Lys Leu Ser Val Glu Gly Phe Ala Val Asp Lys Met  
 204 850 855 860  
 205 Ala Gly Glu Val Lys Ala Phe Phe Glu Ser His Pro Ala Pro Ser Ala  
 206 865 870 875 880  
 207 Glu Arg Thr Ile Gln Gln Cys Cys Glu Asn Ile Leu Leu Asn Ala Ala  
 208 885 890 895  
 209 Trp Leu Lys Arg Asp Ala Glu Ser Ile His Gln Tyr Leu Leu Gln Arg  
 210 900 905 910  
 211 Lys Ala Ser Pro Pro Thr Val  
 212 915  
 214 <210> SEQ ID NO: 3  
 215 <211> LENGTH: 18  
 216 <212> TYPE: DNA  
 217 <213> ORGANISM: artificial sequence  
 219 <220> FEATURE:  
 220 <223> OTHER INFORMATION: forward primer  
 222 <400> SEQUENCE: 3  
 223 ttctctgccc ccctgtgg 18  
 225 <210> SEQ ID NO: 4  
 226 <211> LENGTH: 23  
 227 <212> TYPE: DNA  
 228 <213> ORGANISM: artificial sequence  
 230 <220> FEATURE:  
 231 <223> OTHER INFORMATION: reverse primer  
 233 <400> SEQUENCE: 4  
 234 agtgctaatttccatgttc gag 23  
 236 <210> SEQ ID NO: 5  
 237 <211> LENGTH: 33  
 238 <212> TYPE: DNA  
 239 <213> ORGANISM: artificial sequence  
 241 <220> FEATURE:  
 242 <223> OTHER INFORMATION: probe  
 244 <400> SEQUENCE: 5  
 245 cgacttggat tacagaatga cctttctcc ttg 33

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/588,104

DATE: 08/10/2006

TIME: 11:02:41

Input Set : A:\004974.01207 SEQUENCE LISTING.txt

Output Set: N:\CRF4\08102006\J588104.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No  
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date